# Louis Stokes Alliances for Minority Participation

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Final Data Submission Florida A&M System Administration (4 Year Institution) Florida 2001

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OMB #3145-0136



Ralph W Turner ; *Florida A&M University* AMP: Alliance for Minority Participation Project

#### **Participant Individuals:**

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Participants' Detail

# **Partner Organizations:**

Albany State University: Financial Support; Facilities; Collaborative Research

Albany State University (ASU) is one of the thirteen institutions within the FGLSAMP consortium located in Albany, Georgia. ASU serves as an undergraduate partner institution. ASU uses FGLSAMP as a drawing card and recruiting tool. ASU also provides FGLSAMP students with a prefreshman summer program, summer internships, mentoring and places emphasis on graduate school. ASU matches the NSF funding by a 2 for 1 of their institutional dollars. As a part of the 2 for 1 matching contribution, Georgia awards the HOPE Scholarship to all high school graduates with 2.8 or better GPA. Additionally, ASU awards both foundation and presidential scholarships. ASU encourages its students to transition into a FGLSAMP graduate institution or other graduate degree offering institutions to pursue graduate degrees in SEM disciplines. Collaborations include; Historically Black Colleges and Univeristies (HBCUP), funded by NSF and the Math and Science Saturday Academy sponsored by a GTE Focus Grant.

#### Bethune-Cookman College: Financial Support; Facilities; Collaborative Research

Bethune-Cookman College (BCC) located in Daytona Beach, Fl., is a private institution and is one of the thirteen partner institutions. BCC matches the NSF funding with a 2 for 1 match of institutional dollars. The funding for its matching comes from Presidential Scholarships, the Merit Scholars Program, Excelsior Scholarship, the Mayo Foundation and the Florida Gold Seal to name a few. BCC also provides a prefreshman summer program and summer internships for its students. BCC has a 3/2 engineering program whereby a student can earn a dual degree. Several of the BCC undergraduate scholars have been accepted within the engineering programs at two of the FGLSAMP graduate institutions (FIU and FAMU). Bethune-Cookman College has both formal and informal Articulation Agreements with several education institutions, including Daytona Beach Community College, Embry Riddle Aeronautical University, the University of Central Florida, Valencia Community College, Florida Community College @

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Jacksonville, Indian River Community College and Polk Community College. BCC also collaborates with the Georgia Institute of Technology, Oak Ridge National Laboratories. BCC hosted the eighth annual Career EXPO on January 26-28 in Daytona Beach Fl. BCC has collaborated with governmental laboratories and graduate institutions where their students obtain summer research internships. BCC also collaborates with Florida A&M University on the Minority Science and Engineering Improvement Grant funded by NASA.

## Florida A&M University: Financial Support; Facilities; Collaborative Research

Florida A&M University (FAMU) is one of thirteen institutions in the FGLSAMP consortium and is located in Tallahassee, FL. FAMU conducts a five week prefreshman summer program, a summer research program and a variety of monthly workshops throughout the year for FGLSAMP student participants. Collaborations have been established with numerous research institutions and companies to provide summer research internships for FGLSAMP students. Student tutorial programs are now pervasive on the campus of FAMU. The emergence of these tutorials is heavily influenced by the FGLSAMP @ FAMU tutorials. The FGLSAMP @ FAMU Program has joined the campus based coalition of student support SEM programs - STEM - which allows SEM students to paticipate in year-round research tutorials and attend outstanding science seminars. FAMU matches the NSF funding with a 2 for 1 match in institutional contributions. A portion of matching comes from Distinguished Scholars Awards, the Bright Futures Scholarship and the Presidential Schloarships to name a few. Florida A&M university has the largest number of students represented within the consortium. FAMU, FSU and TCC will host the ninth annual Career EXPO on January 31 - February 3, 2002 in Tallahassee, FL. FAMU, in collaboration with the AGEP Programs operates a summer research training program for FGLSAMP students.

# Florida International University: Financial Support; Facilities; Collaborative Research

Florida International University (FIU), represents predominantly the Hispanic student base of the FGLSAMP consortium. FIU is located in Miami, FL. FIU provides a large number of summer internships and summer research for its students. FIU collaborates with a number of internal and external departments and organizations. These collaborative efforts provide internships, workshops and seminars for their FGLSAMP students as well as community involvement with local clubs and societies. FIU hosts an annual FGLSAMP Scientific Conference on their campus, which is comprised of FLSAMP students who are given the opportunity to share their research projects with mentors, faculty, administrators, advisors, industry professionals, graduate students, parents and their peers. FIU has established a number of goals for their 5 year plan to improve services to recruit minorities in the the sciences, math and enginnering within the SEM major. Additionally; FIU matches the NSF funding with a 2 for 1 match of its institutional dollars.

## Florida Memorial College: Financial Support; Facilities; Collaborative Research

Florida Memorial College (FMC), one of the thirteen institutions within the FGLSAMP consortium is located in Miami, FL. FMC became a part of the Alliance in Phase II of the progam in January 1998 and provided

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tutoring, career awareness and mentoring students in the FGLSAMP Program. The FGLSAMP program at Florida Memorial College has triggered a number of initiatives that could persist beyond the NSF funded program. For example; The FGLSAMP program at FMC motivated the institution to establish a summer bridge program built around science and technology disciplines. This program has stimulated a strong interest from high school students; it has the potential of attracting a sizeable number of SEM students to the program annually, and will most likely, be an annual program. FMC matches the NSF dollars with a 2 for 1 match of their institutional dollars. The Lilly Foundation is one of FMC's contributors and provides funding to encourage minorities to major in SEM disciplines.

# Florida State University: Financial Support; Facilities; Collaborative Research

Florida State University (FSU) is one of the thirteen institutions within the FGLSAMP consortium and is located in Tallahassee, FL. FSU matches the NSF dollars with a 2 for 1 match of its institutional dollars. FGLSAMP participants at FSU are engaged in all enhancement facets of the project. Graduate students supported by the state provide mentoring and tutionial support. FGLSAMP participants are able to conduct academic year research with several campus based faculty.

FSU served as a co-host institution with FAMU to conduct a workshop on Graduates Transitioning to School. FGLSAMP students from FAMU, FIU, and ASU were in attendance. In addition, FSU invites FAMU students to visit their research laboratories, conduct research, and consider FSU as their choice for graduate school. FSU, FAMU and TCC will host the ninth annual Career EXPO on January 31, through February 3, 2002 in Tallahassee, FL.

#### University of Florida: Financial Support; Facilities; Collaborative Research

University of Florida (UF) is one of the thirteen FGLSAMP institutions and is located in Gainesville, FL. UF provides summer internships for FGLSAMP students. Because of UF's dedication to provide opportunities for minority students to pursue graduate degrees in engineering diciplines, several of our FGLSAMP students who are engineering majors, select UF to continue their graduate studies. UF has established a program under the direction of the College of Engineering that addresses the full educational continuum including recruitment, retention, admissions, academic support, orientation, tutoring, academic advising, personal counseling, summer employment, financial aid, graduate school admissions, and job security. The University of Florida is the recipient of the NSF Alliance for Graduate Eduation and the Professoriate (AGEP) Grant which is designed to attract Alliance minority student to graduate school in SEM disciplines. UF also matches NSF funding with a 2 for 1 institution match.

# University of Miami: Financial Support; Facilities; Collaborative Research

Unversity of Miami (UM) is one of the thirteen institutions within the FGLSAMP consortium, and is located in Miami, FL. UM was added in Phase II of the program. Their major goals are to; recruit increased numbers of students entering the Biomedical Engineering major at the freshman level; graduate students in 4 years and to establish a structured and

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collaborative relationship with the Department of Biomedical Engineering at UM for the purpose of facilitating the enrollment of B.S. degree graduates into their Ph.D. program; and to to enhance the graduate school preparation of FGLSAMP participants through involvement in intramural and extramural research experiences. UM matches the NSF dollars with a 2 for 1 match of its institutional dollars.

# University of Central Florida: Financial Support; Facilities; Collaborative Research

University of Central Florida (UCF) is one of the thirteen institutions within the FGLSAMP consortium and is located in Orlando Florida. Graduate students, supported with state funding serve as tutors and mentors to FGLSAMP undergraduates. Through the efforts of FGLSAMP at BCC and UCF College of Engineering Minority Faculty Advisory Committee a Dual Degree program is in place. Along with other Minority Engineering and Computer Science Program (MEP) scholars and In-Rodad students, FGLSAMP students have enjoyed summer employment at ocal compaines. UCF has established a program to recruit FGLSAMP undergraduate students into their graduate engineering program. The university matches the NSF dollars with a 2 for 1 match of their institutional dollars.

# University of South Florida: Financial Support; Facilities; Collaborative Research

The University of South Florida (USF) is one of the thirteen institutions within the FGLSAMP consortium and is located in Tampa Florida. Graduate students supported with state funding serve as tutors and mentors to FGLSAMP undergraduats. USF's mission is to educate a diverse student body. The university matches the NSF dollars with a 2 for 1 match of its institutional dollars. INROADS, Florida Education Fund, Georgia Tech Focus, Careers of America and GEM are a few of the universities contributors. FGLSAMP undergraduate students also have opportunities to conduct research year rouond at FIU.

# Florida Community College @ Jacksonville: Financial Support; Facilities; Collaborative Research

The Florida Community College @ Jacksonville is a FGLSAMP institution and serves as one of three community colleges within the FGLSAMP consortium. Students enrolling at FCCJ do not declare a major at the institution but are encouraged to transition into one of the FGLSAMP institutions. The overall goal is to assist the student toward the goal of earning an Associate of Arts degree with a strong SEM background. The University of North Florida provides a schedule of speakers that present topic of scientific interest for students majoring in SMET. FCCJ also matches the NSF dollars with a 2 for 1 match of its institutional dollars.

# Miami-Dade Community College: Financial Support; Facilities; Collaborative Research

Miami-Dade Community College is one of three community colleges within the consortium and is located in Miami, FL. MDCC's retention efforts from tutoring, mentoring and software program usage show consistent positive results and have expanded some support mechanisms to the

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Internet. MDCC activities are focused on bringing in new potential engineering students as part of an articulation agreement with four year engineering schools. MDCC has several FGLSAMP students who are encouraged to transition into one of the FGLSAMP upper division institutions. The FGLSAMP students have started a FGLSAMP Society. MDCC also matches the NSF funding with a 2 for 1 match of its institutional dollars. Plans are being developed for MDCC students to obtain research experience at FIU during the summer prior to their Junior year.

#### Tallahassee Community College: Financial Support; Facilities; Collaborative Research

Tallahassee Community College (TCC) is one of three community colleges within the FGLSAMP consortium and is located in Tallahassee, FL. Since the Fall Semester 1998, the FGLSAMP Club has been recognized as an official club at TCC. The club not only provides academic support through peer and faculty mentoring but it also provides workshops on resume development, improving interviewing skills and techniques, test taking strategies and enhancing study skills, etc. TCC has established a program for FGLSAMP students to transition into one of the FGLSAMP uupper division institutions to pursue SEM Majors. Over 70% of TCC AA graduates transfer to a state university within a year of graduation. TCC also matches NSF funding with a 2 for 1 match of their institutional dollars. TCC, FAMU and FSU will host the ninth annual Career EXPO on January 31,- February 3, 2002 in Tallahassee, FL. FGSLAMP students at TCC and at FAMU share in FGLSAMP activities, particulary science seminars.

#### **Other collaborators:**

The FGLSAMP Office has established a sustained collaborative relationship with four other NSF projects (FCETP, CREST, HBCU-UP, and AGEP).

The Florida Collaborative for Excellence in Teacher Preparation (FCETP)was established in 1998. The project is designed to bring together a diverse group of science/mathematics and education discipline faculty who are committed to improving the preparation of K-12 science and mathematics teachers and influencing the quality of education at the elementary, middle and high school levels.

The Center for Research Excellence in Engineering, Science and Technology (Crest)Project in Florida involves Florida A&M University and Florida International University -two institutions which are involved in the FGLSAMP project. Collaboration with CREST includes mentoring, seminars and summer research activities. FGLSAMP and CREST share resources for seminars and student presentations at SEM conferences.

Florida A&M University received support in 1999 for a project under the Historically Black College and Universities Program (HBCU-UP)umbrella to influence an increase in the number of students who qualify for admission to graduate degree programs (particularly the doctoral degree) in SMET fields. The FGLSAMP Project collaborates with the FAMU HBCU-UP in the area of research experiences, usage of the Academic Learning Center, tutiorials and mentoring, faculty development and curriculum development activities.

The Alliance for Graduate Education and the Professoriate (AGEP) .../NSF PrjRpt?@@@bcjfgnkrpnow%3Ay%3A509361616%3Ax%3ARENRUT%3AemaNts11/05/2001 project is a joint effort of the University of Florida and Florida A&M University to increase the number of minority students who pursue graduate degrees in SEM disciplines through seminars, research, internships and visitations to SEM graduate departments. This past year, AGEP supported ten summer research interships at FAMU for FGLSAMP Students.

# **Activities and findings:**

### Research and Education Activities:

Project Goals: The overarching goal of the Florida-Georgia Louis Stokes Alliance for Minority Participatin in Science, Engineering and Mathematics is to significantly increase the number of students who obtain undergraduate and graduate degrees in the science, mathematics, and engineering areas.

#### Specific goals are:

1. To recruit increased numbers of students to the SEM disciplines at the freshman and junior levels and graduate these students from the disciplines of their choice in 5 years (some engineering disciplines), 4 years, or 2 years respectively;

2. To establish structured relationships with a significant number of graduate institutions for the purpose of facilitating the enrollment of SEM B.S. degree graduates into Ph.D. granting programs;

3. To explore and plan for the establishment of several 5-year BS/MS combined degree programs at participating Alliance institutions; 4. To enhance the graduate school preparation of FGLSAMP participants through the provision of significant external research experiences; 5. To promote improved student academic performance through organized, well established, working relationships among students and between students and faculty;

6. To provide for prospective matriculants a summer academic experience that will review and preview important mathematics and science concepts as part of a plan to reduce high attrition in the freshman year;

7. To develop a critical mass of highly motivated minority students who, by their organized and serious approach to their work, will serve as positive role models for other students;

8. To enhance faculty teaching skills and improve student learning through faculty conferences and workshops; and

9. To motivate students to pursue advanced degrees in SEM disciplines, through regional conferences and Career EXPOs. 10. To have each participating institution establish a plan, with external partnership support, to institutionalize the FGLSAMP Program.

### Recruitment Activities:

The FGLSAMP staff at each institution mail program brochures and application forms to high school counselors to attract students to the FGLSAMP program to pursue a major in the SEM disciplines. The Science Academic Coordinators visit selected high schools and community colleges to attract students to the program. FGLSAMP students that are in the program also assist in the recruitment effort.

# Research and Education Activities:

Research in the SEM areas is a key component in the FGLSAMP curricula. The project was designed on the premise that the ultimate career choice of our students is influenced by their exposure to the respective careers. All particpants are expected to complete one, preferably two, internship experiences. Academic and career

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advisement are also important to ensure the timely movement of students through the curricula and establishing linkages with graduate institutions. All project participants are assigned to an advisor/mentor. Statistics reveal that more than 80% of FGLSAMP participants complete their B.S. degree in four or five years for some engineering diciplines.

Summation of an External Evaluation:

In my view, FGLSAMP is a program with a clearly articulated vision that is repsponsive to the needs of its minority student participants. Within this larger central vision, however, there is some diversity of effort at each individual institution. This feature is not reported as a negative feature of FGLSAMP, but rather as a positive feature because the contexts for service found on each of the campuses are very different. This flexibility is a strength of FGLSAMP that appears in many ways. A high degree of collegiality has been noted between all of the institutional leaders. The Principal Investigaor believes that there exists a commitment between the central and institutional leaders that the overall vision will be foregrounded, yet a trust also exists that allows the individuals to make local decisions that address the idiosyncratic needs of their students based on the resources that are available.

Graduate School Transitional Activities:

The Alliance makes the following concerted efforts to encourage and place FGLSAMP students in graduate schools to pursue Ph.D. degrees in SEM disciplines:

1. Throughout the year, each participating institution holds special sessions where speakers present the importance of acquiring Ph.D. degrees in SEM disciplines and the opportunities available to FGLSAMP scholars to attend graduate schools;

2. The Science Academic Coordinator holds GRE preparation workshops for juniors and graduating seniors;

3. The Alliance holds an annual Career EXPO where graduate participating institutions set up booths and focus on attracting FGLSAMP scholars to graduate school;

4. The NSF AGEP offers FGLSAMP students research internships and invites them to matriculate in graduate school;

5. The Alliance holds a special workshop, "Transitioning to Graduate School", where graduating seniors and faculty come together in a forum to discuss issues that promote a smooth transition to graduate school.

#### Findings:

Activities in the Alliance have been driven by the aforementioned goals, and have resulted in the following major developments:

1. Since 1993, FGLSAMP has secured, from the Florida Legislature, an average of \$643,000 per year for support of the Florida FGLSAMP institutions.

 The number of SMET B.S. graduates at participating institutions has more than quadrupled since 1991 (416) in 1991 to 2,145 in 2001.
Participation of undergraduate students as FGLSAMP scholars has increased from 454 in 1993 to 1,268 in 2001.

4. Over the past eight years, the Alliance has graduated a total of more than 913 FGLSAMP supported scholars from four (4) of the major undergraduate participanting institutions. At least 441 of these

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students are enrolled in graduate programs. 5. The Alliance has hosted two Regional Conferences, eight Career EXPOs and collaborated in the implementation of one NSF-AMP Student Research Conference. 6. Since 1994, the Alliance has secured more than 1,021 summer internships for eligible FGLSAMP scholars. 7. Plans have been completed to upgrade the FGLSAMP Website. The new homepage features a quest book where visitors can sign-in and leave comments and/or suggestions concerning the project. FGLSAMP alumni are expected to use this feature extensively. In addition to pertinent recruitment informational literature, the 8. Alliance has prepared an FGLSAMP Operations Manual. 9. The FGLSAMP Schematic Flowchart and Degrees Earned Hourglass have been requested as models by several institutions. 10. A powerpoint presentation reflecting the accomplishments of the FGLSAMP Program has been prepared. This presentation is available for use in future meetings and at conferences. 11. The FGLSAMP Steering Committee holds frequent meetings throughout the year to address critical issues and make plans for execution of program activities. This Committee has embraced a generalized plan for the institutionalization of FGLSAMP at every participating institution. This plan has been presented to the Governing Board for adoption.

Progression and Persistence data are requested from four of the 13 FGLSAMP participating institutions to see how many students are making timely progress. Progression is defined as progress made toward attaining the B.S. degree in the declared major in four or five years. Persistence toward the B.S. is defined as students who may have made a major change from the declared SMET major but are still progressing toward the B.S. degree. Persistence in SMET is defined as students who remain enrolled in a SMET area and make progress toward the B.S. For 2000, the four institutions enrolling more than 80% of scholars reported the following:

Institution	Progression	Persistence to BS	Persistence to SEM
ASU	86%	99%	96%
BCC	82%	93%	83%
FAMU	888	96%	89%
FIU	86%	98%	92%

#### Training and Development:

1. a. Program Component Replication: 'Value Added' for Inter and Intra-Institutional Programming and Coherence'. The FGLSAMP Project places emphasis on student internships as an integral part of the curricula.

Internships and Research: All FGLSAMP Undergraduate institutions require students to complete summer internships as a part of the research experience. Students are also required to complete interim and final reports and give oral and poster presentations upon the completion of their summer internship/research experience.

b. Electronic Classrooms. Through the support of the U.S. Department of Education, three FGLSAMP institutions have established electronic classrooms (ASU, FAMU, FIU). Recently, Bethune-Cookman College has invested in the addition of new computer labs at their college. The University of Miami, with internal and external funding from their Howard Hughes Medical Institute has established an electronic classroom.

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c. Bethune-Cookman and Florida A&M University have collaborated on the establishemnt of Science Instructional Centers on the campus of each institution. This program is supported by the U.S. Department of Education.

d. FAMU's Science Learning Center is designed to increase opportunities for cooperative learning and enhance students' need to mastery of materials in gatekeeping courses. In like manner Albany State University has been funded by GTE FOCUS Foundation to provide activities on the uses of math and science in high interest careers. FGLSAMP students serve as tutors for 8th and 9th grade participants in this project. Florida Memorial College reports that NSF funds are used as a leverage for securing funding from the National Aeronautics and Space Administration (NASA) grant to support a mathematics and science summer pre-sophomore research institute attended by FGLSAMP as well as non-FGLSAMP students.

e. The University of Miami is requiring their students to take a seminar each semester during their first and second years. Some seminar topics include ethics in research, recent advances in biotechnology, and evolution. The final seminar of the series is research methods where faculty members describe their research.

f. The Alliance continues to seek ways to enhance students learning through educational training and development.

#### Outreach Activities:

1. The Annual FGLSAMP EXPO Career Conference is an ongoing activity which is supported by all 13 FGLSAMP institutions. FGLSAMP will hold its ninth annual EXPO on January 31- February 3, 2002 in Tallahassee, Florida. Florida A&M University, Florida State University and Tallahassee Community College will co-host this activity. The EXPO provides outreach to graduate schools, businesses and industry with the expectation that FGLSAMP students obtain admission to graduate schools, internships, scholarships and job placements. Each year high school students from the local area are invited to participate in the poster and oral sessions. Students at Florida A&M University and Florida International University engage in tutorial and mentoring service to middle and high school students.

#### **Journal Publications:**

# Book(s) of other one-time publications(s):

#### **Other Specific Products:**

#### **FGLSAMP** Research Abstracts

FGLSAMP Abstracts are required of all FGLSAMP students who have performed research or participated in an internship. The abstracts provide detailed information about the research and the findings of the students.

The information provided in the abstracts are shared with other students within the FGLSAMP consortium at AMP conferences and annually at the career EXPOs. In addition, the information is disseminated to all LSAMP diciplines within the Alliance.

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# **Internet Dissemination:**

#### www.fglsamp.com, hhtp://beavis.fiu.edu/fgam/htm

The two websites listed above are located at Florida A&M University and Florida International University. The websites are designed to provide information on the FGLSAMP Project, the requirements for admission and activities. FGLSAMP students have obtained valuable information concerning internship and research possibilities from the site. A guestbook and chat page are being designed so anyone can provide comments about the site.

#### **Contributions:**

# **Contributions within Discipline:**

In pursuit of the FGLSAMP mission, FGLSAMP utilizes a conceptual model established by the National Science Foundation (NSF) as a guiding force. The concept is based upon the nine specific goals addressed earlier and is aimed at positively influencing the progression, persistence and ultimatley graduation rates of minorities in the SMET fields of study. A key factor in the success of the project is its holistic approach, which spans from the pre-matriculation level to receipt of the B.S. degree. Primary activities of the project are aimed at strengthening the level of academic preparation and progression of students in their selected field of study. As a result of the commitment and contributions of the FGLSAMP Institutional and Science Academic Coordinators at the undergraduate granting FGLSAMP institutions, the project is influencing success in the SEM fields for non-FGLSAMP students at the participating institutions. Contributions include the following:

-FGLSAMP tutorial services are available to any SEM student. -Institutional coordinators and staff provide internship site information to any SEM student seeking research exposure. -GRE preparation seminars and practice services are available to any student. -Faculty in related SEM departments are invited as chaperons and judges to the annual EXPO. -Faculty in related disciplines serve as mentors to FGLSAMP scholars and associate scholars. -The project has expanded enhancement services to any interested student by designating an 'Associate' category. These students receive all enhancement services but do not receive direct finaincial support from FGLSAMP. -Faculty in related SEM disciplines have begun developing web-based SEM courses in general chemistry, physics, mathematics, engineering and computer science. -FAMU mathematics and science education project directors in coordination with the FGLSAMP Director, have formed a Science, Technology, Engineering and Mathematics (STEM)Committee. This committee is devoted to establishing cost-effective, collaborative ways to increase minority enrollment and progression in SEM disciplines univerisity-wide. -The project staff assist other SEM units with the development of proposals to expand enhancement services for entry-level science and mathematics students.

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There are several NSF programs designed to increase the number of underrepresented minorities in the SEM areas. Businesses and organizations are equally interested in increasing the SEM pool and; therefore, provide funding to many of our partner institutions to increase these numbers. As a result of the need to educate, graduate and increase the numbers of underepresented minorites in the SEM diciplines, graduation rates more than quadrupled since the inception of the project. Development of the team approach to tutoring, research training, teaching and grantmanship, workshops and early and sustained exposure to reseach are all activities that have contributed to the success of the project.

Internships have been another invaluable contribution to the SEM disciplines across the Alliance. Over 1,021 internships throughout the country were made available to the FGLSAMP students. A few internship sites were located outside of the U.S. (Canada and Germany).

# **Contributions to Other Disciplines:**

Although the FGLSAMP Project caters to students within the SEM disciplines, students in other disciplines also reap the benefits. Several of the students outside of the SEM arena attend many of the tutorial and mentoring sessions to improve their grades. In addition, several students attend many of the workshops and conferences provided under the FGLSAMP umbrella.

# **Contributions to Education and Human Resources:**

The FGLSAMP Project view research exposure as an integral part of the SEM curiculum. Accordingly, student participants are expected to engage in intramural or extramural research endeavors. The majority of participants fulfill this requirement during the summer term. The Alliance has built a data bank of agencies/laboratories which sponsor our students on a regular basis. During the 2000 summer term, more than 160 FGLSAMP participants were engaged in research at more than 87 sites across the nation. A small cadre of FGLSAMP participants are pursuing science and mathmatics teacher preparation curricula (S/MTP). These students interact with faculty in the Colleges of Education as early as the summer prior to matriculation. Since the State of Florida now has a Collabortive for Excellence in Teacher Preparation Project, the two projects will combine efforts geared toward ehnancing the education of a large number of pre-service teachers.

-The enhancement component of FGLSAMP provides a variety of experiences includeing: discipline- related seminars and workshops; field exposure for summer prematriculation participants; academic and career mentoring and GRE Preparation workshops. The FGLSAMP Student organizations, based at the participating sites, serve as a key role in promoting a SEM-community focus and in disseminating information about the project. These scholars are our best ambassadors and are critical to the success of the project.

-FGLSAMP participants are provided partial scholarships based on their .../NSF PrjRpt?@@@bcjfgnkrpnow%3Ay%3A509361616%3Ax%3ARENRUT%3AemaNts11/05/2001 GPAs in addition to enhancement services. Associate scholarships are provided all enhancement services without any financial support from FGLSAMP.

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-The FGLSAMP Teacher Preparation component provides for early exposure to the classroom. These students are expected to influence precollege students both in the area of science and mathmatics proficiency and career development.

-Materials developed through the FGLSAMP Project are sensitive to our general readership and describe activites in layman terms.

The website at FAMU has received numerous positive comments from alumni and parents. It is a project policy that parents and other supporters be invited to all events.

## **Contributions to Resources for Science and Technology:**

The production of competent SEM graduates is critical to enhancing the national workforce in science, mathematics and engineering. The FGLSAMP project uses a holistic approach in preparing prospective graduates for their career choices. Research activities are fused into the curricula pursued by all participants. The majority of students engage in research during the summer term. However, some students are also engaged in academic year research. The influence of the project can best be observed in the statistics provided instudent progression and persistence. The increase in the number of B.S. graduates in SEM areas at the participating institutions increased from 416 in 1991 to 2,145 in 2001 is another attribute of the project.

#### **Contributions Beyond Science and Engineering:**

The project focuses expressly on preparing SEM graduates. Given the diversified experiences to which students are exposed our graduates will be knowledgeable to contribute to solutions of and make informed decisions on any national or worldwide societal problems .

#### **Special Requirements for Annual Project Report:**

Unobligated funds: less than 20 percent of current funds

Categories for which nothing is reported: Products: Journal Publications Products: Book or other one-time publication Special Reporting Requirements Animal, Human Subjects, Biohazards

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# Florida-Georgia Louis Stokes Alliance for Minority Participation

# Phase II (1997-2002)

FGLSAMP Scholar Demographic 1999-2001

. 1: 1



	1999	2000	2001
NSF	291	322	357
Matching	506	565	642
Associate	262	382	401
Total	1,059	1,269	1,381

# Florida-Georgia louis Stokes Alliance for Minority Participation Phase II (1997-2002)

Trend Analysis for FGLSAMP B.S. Degrees Earned 1991-2001



# Florida-Georgia Louis Stokes Alliance for Minority Participation Phase II (1997-2002)

# Progression and Persistence Rates for 2001



# Florida-Georgia Louis Stokes Alliance for Minority Participation Phase II (1997-2002)

# Progression and Persistence Rates for 2001

